

Search for $0\nu\beta\beta$ with the Complete EXO-200 Dataset

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The EXO-200 Collaboration searched for neutrinoless double beta decay ($0\nu\beta\beta$) using a liquid xenon time projection chamber filled with ~150 kg of enriched ^{136}Xe from September 2011 to December 2018. The use of a multi-dimensional analysis including calorimetric, spatial and topological information for the events allowed EXO-200 to perform one of the most sensitive searches for ($0\nu\beta\beta$) to date. For the final analysis, advanced techniques such as a Deep Neural Network were deployed to maximize the topological discrimination between signal and gamma backgrounds. This talk will present the analysis of the full dataset from EXO-200, including the final $0\nu\beta\beta$ result and other physics searches.

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Session Classification: Double Beta Decay - Parallel II

Track Classification: Double Beta Decay